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## PROBABLE DEVELOPMENTS IN THE EUROPEAN SATELLITES THROUGH MID-1956

*Submitted by the*

### **DIRECTOR OF CENTRAL INTELLIGENCE**

*The following intelligence organizations participated in the preparation of this estimate: The Central Intelligence Agency and the intelligence organizations of the Departments of State, the Army, the Navy, the Air Force, and The Joint Staff.*

*Concurred in by the*

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*on 24 August 1954. Concurring were the Special Assistant, Intelligence, Department of State; the Assistant Chief of Staff, G-2, Department of the Army; the Director of Naval Intelligence; the Director of Intelligence, USAF; the Deputy Director for Intelligence, The Joint Staff; the Atomic Energy Commission Representative to the IAC. The Assistant to the Director, Federal Bureau of Investigation, abstained, the subject being outside of its jurisdiction.*

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## PROBABLE DEVELOPMENTS IN THE EUROPEAN SATELLITES THROUGH MID-1956<sup>1</sup>

### THE PROBLEM

To estimate the current situation and probable developments in the European Satellites through mid-1956.

### CONCLUSIONS

1. The Kremlin almost certainly regards the maintenance of the Soviet position in Eastern Europe as essential for: (a) safeguarding the military security of the USSR through possession of advanced bases and defensive positions outside Soviet frontiers; (b) adding to the economic and military resources of the USSR; (c) upholding the prestige of the USSR in its role as leader of the world Communist movement; and (d) checking the re-emergence of a powerful Germany allied with the West. We believe, therefore, that the Kremlin will continue to push forward its long-term plans for integration of the Satellite countries into the Soviet system, though almost certainly not, during the period of this estimate, to the point of outright incorporation into the USSR.

2. The emergence of a new leadership in Moscow has not weakened Soviet control over the Satellites. This control remains virtually complete and is unlikely to diminish or to be successfully challenged from within during the period of this estimate.

mate. Although the principal obstacle to the Sovietization of Eastern Europe is and will continue to be the opposition of the Satellite populations to Communism and Soviet domination, this opposition alone will not seriously impair Soviet control or threaten the stability of the Satellite governments.

3. The revisions of Satellite economic plans have not altered the Kremlin's basic aim of increasing as rapidly as practicable the Satellites' contribution to Soviet economic power. These revisions are aimed primarily at removing the threats to future industrial growth by correcting the imbalances in the Satellite economies resulting from an overemphasis on heavy industry at the expense of agriculture and light industry. In essence, they provide for slowing down the expansion of heavy industry in 1954-1955 and for increasing the resources allotted to agriculture and consumer industries. Nevertheless, Satellite economic policies will still be strongly oriented toward development of heavy industry. At the same time, defense outlays will probably be maintained at approximately present or only slightly higher levels. We believe that the revised economic programs will not result in any

<sup>1</sup>As used in this paper, the term "Satellites" means "European Satellites" and includes East Germany, Poland, Czechoslovakia, Hungary, Rumania, Bulgaria, and Albania.

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significant improvement in the standards of living and that the Satellite governments at the end of this period will be faced with much the same basic economic problems as at present.

4. By the end of 1953, the combined GNP (Gross National Product) of the Satellites had returned approximately to the level of 1938. We estimate that total Satellite GNP in 1953 was about two-fifths that of the USSR and that this ratio will remain substantially unchanged through 1956. During this period the growth rate will probably average about 4 percent annually as compared with an average of 6 percent annually from 1948 through 1953.

5. The productive capabilities of the Satellites constitute an important addition to Soviet economic strength and war potential in certain fields. The Satellites provide a substantial proportion of Soviet Bloc production of uranium ore; East Germany alone accounts for about 50 percent of total Bloc production. The Satellites also supply the USSR economy substantial quantities of industrial goods,

notably precision instruments, certain chemicals, selected items of machinery and transport equipment, and electrical equipment.

6. The Satellite armed forces have become a substantial element in the balance of military power in Europe. We estimate that the Satellite armies will reach an over-all peacetime strength of approximately 1,265,000 men by mid-1955 and that no substantial increase is likely thereafter. The Satellite air forces now have an estimated TO&E strength of 3,600 aircraft of all types (approximately 2,400 actual), and we estimate that by mid-1956 they will probably have a TO&E strength of 4,400, of which 2,450 will probably be jet fighters. The Satellite naval forces have only minor capabilities. We believe that while the Satellite armed forces would probably fight well against traditional enemies, their reliability will remain sufficiently questionable during the period of this estimate to place a significant limitation upon their military usefulness in event of general war.

## DISCUSSION

### I. SOVIET AIMS IN THE SATELLITES

7. Soviet policy in the Satellites is directed toward developing them into a strong area of the Soviet empire which will increase Soviet power and strengthen the Soviet world position. The Kremlin almost certainly regards the maintenance of the Soviet position in Eastern Europe as essential for: (a) safeguarding the military security of the USSR through possession of advanced bases and defensive positions outside Soviet frontiers; (b) adding to the economic and military resources of the USSR; (c) upholding the prestige of the USSR in its role as leader of the world Communist movement; and (d) checking the re-emergence of a powerful Germany allied with the West.

8. We believe that the Kremlin will continue to push forward its long-term plans for integration of the Satellite countries into the Soviet system, though almost certainly not, during the period of the estimate, to the point of outright incorporation into the USSR. During the next two years Soviet policy will probably concentrate on perfecting the Soviet mechanism for directing over-all Satellite development and on consolidating the position already won, rather than on striking out on any new aggressive campaign of Sovietization. Primary concentration will probably be upon:

a. Maintaining the system of controls which bind the Satellites to the USSR while attempting to make Communist programs more palatable to the populations;

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b. Continuing the development of Satellite heavy industrial potential, but at a reduced rate of growth which will permit greater emphasis than in the past on agriculture, and which is based on a more realistic appraisal of Satellite material and human resources;

c. Strengthening of the Soviet military position by modernizing airfield and radar net facilities, by increasing the combat effectiveness and political reliability of Satellite forces, and by qualitative improvement rather than enlargement of Soviet forces stationed in the Satellites.

## II. THE SYSTEM OF SOVIET CONTROL

9. Soviet control of the Satellites is based on the Soviet armed forces stationed in Eastern Europe, on the MVD (Soviet security services), on Soviet diplomatic, economic, and military missions in each Satellite, and is exercised through the Satellite Communist parties and governments. In addition, the USSR exercises direct administrative authority in many instances through Soviet citizens in key positions or in command of ministries, armed forces, and industries. Through this system the USSR provides the Satellite governments with over-all policy guidance. When necessary, Satellite leaders are called to Moscow for instructions. Although Moscow permits and encourages programs of cultural, economic, and technical collaboration among the Satellites, the Soviet control system is designed to bind the Satellites individually to the USSR rather than to one another. Enforcement of obedience to Soviet wishes is assured by the system's military and police power.

10. The USSR continues to maintain strong combat-ready forces, totalling an estimated 531,000 army troops, 24,000 security troops, and 1,800 aircraft (estimated actual strength) in the Satellites, mostly in East Germany. Although the deployment of these forces is based primarily on strategic rather than internal security considerations, the mere presence or near proximity of Soviet forces has had and is likely to continue to have the effect of restraining potential resistance. The overt employment of Soviet troops in suppressing the 17 June 1953 riots in East Germany demon-

strated Soviet willingness to use these forces where necessary. In addition, the Satellite armed forces, which are being developed under close Soviet supervision, now total over 1,100,000 army troops, 300,000 security troops, and 2,400 aircraft (estimated actual strength). This military development program provides the Soviet Union with important additional means of internal security, mass-indoctrination of youth, and control.

11. Under MVD aegis the various Satellite security services have become in effect a part of the USSR's police mechanism in Eastern Europe. Since 1950 they have been reorganized according to the MVD pattern, staffed by personnel deemed reliable by the MVD, and brought under MVD control through a system of advisers. The MVD headquarters in Moscow gives these services over-all policy guidance and exercises direct control over liaison between one Satellite service and another. As a result of this integration, the Soviet Government now has a security service of disciplined local nationals at its disposal in each Satellite. This service operates as an arm of the MVD in detecting and suppressing all forms of subversion and in maintaining Soviet authority and the stability of the Satellite governments. Although some individual defections may still occur as an aftermath of the Beria purges, we believe that the effectiveness of the Satellite security services will not be impaired to any material extent.

12. The Satellite Communist parties, the leaders of which are approved by the Kremlin, constitute the principal instrumentality for implementing Soviet policy and for imposing Soviet ideological and institutional forms upon the Satellite populations. These parties provide the inner core of Satellite government leadership, play a leading role in managerial assignments, regulate the local control machinery, and direct the "voluntary activities" of the people. The complete subservience of the Satellite Communist parties to the new Soviet rulers has been reaffirmed at the recent Satellite Communist Party congresses, which were attended by top-level Soviet officials (e.g., Khrushchev at the Polish and Czechoslovak

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congresses, Mikoyan at the East German, Voroshilov at the Hungarian, Pospelov at the Bulgarian).

13. The Soviet Union exercises control over the economic development of the Satellites by fixing over-all production goals and priorities, by regulating the trade relations of these countries with the USSR, and by supervising their trade with other areas. Satellite economic plans are prepared in accordance with general policies issued by the Soviet Union, but determination of detailed measures to accomplish plan objectives is probably supervised only indirectly by Moscow. Now that Hungary and Czechoslovakia have readjusted the timing of their plans, all the Satellites, with the exception of Bulgaria, have long-term plans which are synchronized with the next Soviet Five-Year Plan, 1956-1960. The machinery for coordination of planning is probably the Council of Economic Mutual Assistance (CEMA) which includes the USSR and Satellites as members and maintains a permanent headquarters in Moscow. Soviet control is exercised, in addition, through a system of tight bilateral trade and financial arrangements.

14. More subtle aspects of control in the trading system arise from increased Satellite dependence upon Soviet sources of raw materials and certain capital goods, and integration of trading agreements with long-term plans. The effectiveness of this type of control has grown with the reorientation of Satellite trade toward the Soviet Union and the rapid increase in the volume of this trade. Soviet control is also exerted in some cases through joint companies (notably in Rumania, Hungary, and to a lesser extent in Bulgaria) and by extending long-term credit for such specified purposes as industrial development projects (notably in Poland). The Soviet Government also maintains large economic missions in each Satellite, as well as advisers and inspectors to monitor performance by ministries and industries on commitments under trading agreements, and if necessary, to assume direct supervision.

15. The Soviet pattern of intellectual, cultural, and religious life is being imposed upon the Satellites. The Satellite governments have a monopoly over the schools and mass-information media and have brought church organizations under the control of the state. The educational system has been reorganized to conform with that in the USSR; teaching staffs and libraries have been purged and curricula revised to place emphasis on vocational training and Communist indoctrination. The power of the church has been broken down through the imprisonment of church leaders, the expropriation of church property, the severance of former administrative links with the outside world, and by progressively depriving the church of its facilities to educate the youth. The cultural influence and autonomy of family life have been disrupted by physically and psychologically exhausting work norms, material want and the necessity for the mother to work, obligatory political activities, and the exploitation of small children as unwitting informers on their parents.

### III. POLITICAL DEVELOPMENTS

#### Internal Developments

16. The relationship between the Satellites and the USSR remains basically unchanged since the death of Stalin, but the new Soviet leadership has adopted a more flexible attitude toward the Satellites in some cases. The most conspicuous changes are the new economic policies and the recent moves in East Germany, where the Soviet control commission has been abolished and formal sovereignty granted. We believe, however, that such changes are merely a transformation of the facade of Soviet control and that they indicate a refinement rather than a reduction of actual control.

17. The Satellite leadership groups, which have become almost completely reliable through a continuous process of selection and purging at the direction of Soviet authorities, have been left relatively unchanged by the new Soviet rulers. Although a few new personalities have become more prominent, such as the new party first secretaries in Czecho-

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slovakia, Rumania, and Bulgaria, virtually the same leaders are still in control in each Satellite, and there appears to be little change in their relative influence and power. Moves taken by the Satellites to give a greater appearance of "collective" leadership are probably imitations of the Soviet pattern. There has also been in almost all the Satellites — in conformity with changes made in the USSR — a streamlining of the party secretariats through a reduction in size and a more precise definition of functions. In addition, Soviet ambassadors with long experience in the diplomatic service have been replaced in Czechoslovakia, Poland, Rumania, Bulgaria, and Hungary by men with extensive party experience. These developments seem to support the conclusion that the new Soviet regime has assigned an even higher priority than in the past to strengthening the party apparatus in the Satellite countries.

18. The principal obstacle to the Sovietization of Eastern Europe is the continued opposition of the Satellite populations to Communism and Soviet domination. This opposition has been intensified by the loss of personal freedom and a reduced standard of living, as well as by outraged religious and national feelings, but its effectiveness is severely constricted by the controls imposed on every aspect of the lives of the people. There is virtually no organized active resistance and only little unorganized active resistance. The latter consists mainly of isolated raids by small armed bands and of individual acts of subversion and sabotage. On the other hand, passive resistance continues to be widespread and to constitute a drag on economic programs. The more prevalent forms of passive resistance are worker absenteeism, work slowdowns, crop-delivery evasion, increased church attendance, and whispering campaigns.<sup>2</sup>

19. The Satellite governments are attempting to alleviate unrest by providing a gradual im-

<sup>2</sup> A detailed estimate of Satellite resistance activities and potentialities will be made in a succeeding NIE. See also the report of the Resistance Intelligence Committee, RIR-1, "Anti-Communist Resistance Activities and Potential in Poland," 20 July 1954.

provement in standards of living. However, we believe that these governments will be unable to satisfy consumer cravings on any significant scale or to give the individual a greater feeling of security. Popular opposition therefore will probably continue to slow the process of Sovietization in Eastern Europe and to limit the economic, political, and military gains which the USSR can derive from control of the Satellites. Nevertheless, we believe that, during the period of this estimate, Soviet authority over the Satellites will remain intact, that the control system will be further improved, and that Soviet policies in the Satellites will be directed toward the complete Sovietization of this area. The opposition of the great majority of the Satellite populations will continue to delay this process, but, in the absence of general war, popular dissatisfaction will almost certainly not develop beyond the stage of passive resistance and occasional acts of sabotage. Although East Germany's extensive ties with West Germany provide that state with a greater resistance potential than any other Satellite, a repetition of the June 17 riots is unlikely.

### External Developments

20. During the past year the USSR has made increasing use of the Satellites for political warfare moves. This has been evident in Satellite efforts to further the Soviet proposal at the Berlin conference for a European security system. Especially noteworthy are the Polish and Czechoslovak appeals to French opinion which have pointed out the community of interest between Slavic Europe and France against revival of a nationalist Germany. Pursuant to Soviet wishes the Balkan Satellites have adopted a policy of seeking "normalization" of their long strained relations with Yugoslavia and with Greece and Turkey. There is also evidence of increasing utilization of the Satellites by the USSR to support the activities of Communist parties elsewhere in the non-Communist world. For example, Poland has been given substantial responsibility for support of and guidance to the Italian Communist Party, while Czechoslovakia appears to have a large degree of responsibility for the parties of Central America. Moreover,

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the USSR has further extended its utilization of Satellite diplomatic and trade missions for either joint activities or independent Soviet operations in intelligence and political warfare. During the period of this estimate the USSR will almost certainly continue to use the Satellites to further its diplomatic and intelligence objectives in the non-Communist world.

#### IV. ECONOMIC DEVELOPMENTS

##### Current Economic Policy in the Satellites

21. In 1953, the Satellites undertook revisions of economic plans which — like the plan revisions in the USSR — were aimed at increasing the production of agricultural commodities, especially foodstuffs, and of manufactured consumer goods. The new Satellite plans also stressed expanding the production of basic raw materials and electric power. These plans provide for a modest shift of investment from heavy industry to agriculture and light industry, improved exploitation of existing capacity, and a material incentives program involving concessions to both the collective and private sectors of agriculture and increased benefits to the industrial labor force. Statements by Soviet and Satellite spokesmen have suggested that the revised plans provide for more trade among the Satellites and for more specialization of production. However, further evidence of any recent intensification of the long-standing effort in this general direction is so far lacking.

22. The revision of existing programs was occasioned mainly by the adverse cumulative effects of overemphasis on heavy industry at the expense of agriculture and light industry. While substantial results had been achieved in expanding production in the heavy industrial sectors, and in enlarging the nonagricultural labor force (by about two-fifths since 1948), agricultural production had not only failed to recover to prewar levels but had even declined from the level attained in 1951. This lag in agriculture threatened to retard future industrial growth at a time when urbanization, population increases, industrialization, and the scarcity of foreign exchange made increased agricultural production most essential. Moreover, the situation was further

aggravated by the adoption of goals for the heavy machinery and equipment industries which could not be supported by the basic materials resources and electric power output of the Satellite economics. The new programs are intended to remove these threats to continued long-range industrial expansion.

23. These tactical changes in Satellites economic policy do not alter the Kremlin's basic aim of increasing as rapidly as practicable the Satellites' contribution to Soviet economic power. The Satellites during the next two years will probably continue to place primary emphasis on expanding the production of basic materials and of energy, while slowing the expansion of heavy manufacturing industries until the materials-supplying industries have caught up. At the same time, defense outlays will probably be maintained at approximately present or slightly higher levels,<sup>3</sup> and increased resources will be allotted to agriculture and consumer industries. We believe that it is unlikely, however, that agricultural output will be increased significantly during this period. On the other hand, output of simple consumer durables will probably be increased.

##### Satellite Economic Growth<sup>4</sup>

24. By the end of 1953, the combined GNP (Gross National Product) of the Satellites had

<sup>3</sup> The percentages allocated to defense in the Satellite state budgets are roughly one-half to two-thirds of the percentage of total budget given to defense in the USSR.

<sup>4</sup> The estimates of Satellite GNP in this section are considered generally reliable for analysis of trends of internal economic developments, but because of conceptual and statistical problems, they are less reliable in intercountry comparisons. The probable margins of error of production estimates, based on the valuations of the responsible analysts, imply that the GNP estimates are fairly reliable (considered accurate within a neighborhood of plus or minus 10 percent). Estimates of trends are regarded more reliable than the estimates of absolute magnitudes. Estimates of production of basic materials and energy, such as agricultural products, coal, and electric power, are considered more reliable than estimates of highly manufactured goods, for example, machinery of various types. Data for Albania, Bulgaria, and Rumania generally are less reliable than for the other Satellites.

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returned approximately to the level of 1938.<sup>5</sup> Total Satellite GNP in 1953 was an estimated 45 billion of 1951 US dollars or about two-fifths that of the USSR. We estimate that total Satellite GNP in 1956 will be 51 billion of 1951 US dollars and that the Satellite share of total Bloc GNP will remain substantially unchanged during the period of this estimate. (See Figure 1.) Although the growth rate averaged about 6 percent annually from 1948 through 1953, it will probably average about 4 percent annually from 1954 through 1956.

25. Since the war, about 20 percent of Satellite GNP has been devoted to investment — at least twice as much as prewar. The modification of economic programs in 1953 indicates that for at least the next two years the proportion of GNP devoted to investment may decline somewhat, but as GNP continues to rise the absolute level of investment for the Satellites as a whole will probably remain about the same. Assuming that sums allocated for defense remain at about the same level as in 1953 or increase only slightly, there will be increased scope for allocations to consumption.

26. A breakdown of Satellite GNP by sector of origin indicates the rising relative importance of industry and the decline of agriculture.<sup>6</sup> In absolute terms industry, transport and communications, and construction, have

<sup>5</sup> NIE-87, published 28 May 1953, estimates that Satellite GNP had regained the prewar level by the end of 1951. This estimate has been revised using new price weights and more extensive commodity reports which resulted in slightly different GNP estimates. However, the revised estimates are within a few percentage points of those made for NIE-87.

<sup>6</sup> For a detailed breakdown by country, see Fig. 2.

grown rapidly above the 1938 level, while agriculture remained well below prewar levels. These trends will probably continue through mid-1956 with only slight improvement in agriculture.

ESTIMATED INDICES OF SELECTED SECTORS  
OF SATELLITE GNP<sup>1</sup>

	(1950=100)			
	1938	1950	1953	1956
Industry	110	100	137	168
Transport and Communications	100	100	134	172
Construction	118	100	131	165
Agriculture	118 <sup>2</sup>	100	93	100

<sup>1</sup> Not including Albania.

<sup>2</sup> 1935-1939 average.

27. In 1953 Poland, East Germany, and Czechoslovakia contributed over 80 percent of the total Satellite GNP, while Hungary, Rumania, and Bulgaria (in that order) accounted for less than 20 percent. Adjusted for territorial changes, the output of Bulgaria, Hungary, and Czechoslovakia in 1953 was well above that of 1938, while Poland's output was about at the same level, Rumania's slightly below, and East Germany's about 13 percent below 1938. We believe that Poland, East Germany, and Czechoslovakia will continue to account for over 80 percent of total Satellite GNP during this period. However, the shift of Soviet policy toward a more determined buildup of the East German economy will probably be reflected in growth of the East German GNP at a rate of 6 to 8 percent a year — a more rapid rate than that expected in the other Satellites. By 1956 East Germany will probably outstrip Poland to become the most important contributor to Satellite GNP.

PERCENTAGE DISTRIBUTION OF TOTAL SATELLITES GNP, BY COUNTRIES  
(NOT INCLUDING ALBANIA)

Year	European Satellites	Bulgaria	Czecho- slovakia	East Germany	Hungary	Poland	Rumania
1938	100	2.2	16.4	36.3	5.6	32.8	6.7
1948	100	3.3	21.4	25.6	6.9	35.3	7.5
1950	100	3.1	20.4	27.3	7.2	35.3	6.7
1953	100	3.1	18.7	31.3	7.6	32.8	6.5
1956	100	3.1	18.0	33.5	7.2	31.8	6.4

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## Satellite Industry

28. The distinguishing feature of the industrialization programs imposed on the Satellites by the USSR has been the emphasis placed on heavy industries producing capital goods. Over-all Satellite industrial production was back to the 1938 level by 1951 and in 1953 it was about 25 percent above the prewar level. Within the industrial sector the most impressive growth has been in the production of machinery and equipment, chemicals, metals, energy, and building materials, generally in that order. Output of the light and textile industries surpassed the prewar level in all the Satellites except East Germany, while production of forest products and processed foods generally failed to return to these levels. (See Figure 3.) During the period of this estimate over-all Satellite industrial production will probably increase about 23 per-

cent above the 1953 level, with primary emphasis continuing to be on heavy industrial development.

29. Satellite production of certain key industrial commodities will continue throughout the period of this estimate to constitute a major contribution to the economic strength of the Bloc, particularly in the following fields:

*a. Machinery and Equipment.* Estimated Satellite production in 1953 of machine tools, metal working machinery, electric motors, and steam locomotives ranged from about one-half to about two-thirds that of the USSR, while production of freight cars was 43 percent, tractors 30 percent, and bearings 16 percent. We estimate that during the next two years Satellite output of these commodities, except metal working machinery and tractors, will increase at a faster rate than that of the USSR.

ESTIMATED SOVIET AND SATELLITE PRODUCTION OF SELECTED MACHINERY AND EQUIPMENT PRODUCTS 1953 AND 1956

Commodity	Units	Satellites		USSR		Satellite Production as Percent of USSR	
		1953	1956	1953	1956	1953	1956
Antifriction Bearings	Millions	20	31	125	145	16	21
Tractors	Thousands	36	49	120	175	30	28
Passenger Automobiles	Thousands	37.6	51.0	73.0	80.0	52	64
Steam Locomotives	Units	1,135	1,345	2,310	2,430	49	55
Freight Cars	Thousands of 2-Axle units	59.7	71.7	140.4	151.0	43	47
Machine Tools	Thousands	46.3*	66.6	88.0	97.0	53*	69
Metal-working Machinery	Thousands	6.7	9.1	10.5	19.0	64	47
Electric Motors	Million 1950 rubles	2,405	3,480	3,852	5,136	62	68

\* Bulgaria not included. Production data not available. However, output is relatively unimportant.

*b. Metals Production.* Satellite output of finished steel and pig iron in 1953 was about 24 percent and 22 percent, respectively, of Soviet production. Satellite production of refined lead was about 54 percent, aluminum 19 percent, primary copper 11 percent of So-

viet production. During the period of this estimate, the Satellite-USSR ratio of steel, iron, and copper production will probably remain about the same, while that of aluminum production will substantially increase, and lead substantially decrease.

ESTIMATED SOVIET AND SATELLITE PRODUCTION OF SELECTED METALS 1953 AND 1956  
(In 000's of metric tons)

Commodity	Satellites		USSR		Satellite Production as Percent of USSR	
	1953	1956	1953	1956	1953	1956
Finished Steel	6,700	8,890	27,600	34,200	24	26
Pig Iron	6,200	8,350	28,000	35,800	22	23
Primary Copper	33	50	310	480	11	10
Aluminum Ingot	58	200	310	625	19	32
Primary Lead	90	111	168	280	54	40

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*c. Energy Production.* Satellite production of lignite and brown coal in 1953 was almost 2.5 times that of the USSR, while production of hard coal and electric power was about one-half as much. Satellite production of

crude oil was approximately one-fifth that of the Soviet Union. Satellite production of synthetic petroleum products was about 6 times that of the USSR, but this ratio will be reduced to approximately 3.5 times by the end of 1956.

ESTIMATED SOVIET AND SATELLITE PRODUCTION OF SELECTED  
ENERGY PRODUCTS 1953 AND 1956  
(In billion kwh and million metric tons)

Commodity	Satellites		USSR		Satellite Production as Percent of USSR	
	1953	1956	1953	1956	1953	1956
Electric Power	63	86	133	192	47	45
Lignite and Brown Coal	226.4	280.8	92.0	118.0	246	238
Hard Coal	115.3	132.8	228.0	267.0	51	50
Synthetic Petroleum Products	1.8	2.5	0.3	0.7	600	357
Crude Oil	9.2	14.6	48.0	65.4	19	22

*d. Chemicals Production.* The Satellites produced in 1953 approximately 3 times as much calcium carbide as the USSR, slightly more caustic soda, and about the same amount of chlorine. In 1953 output of synthetic ammonia was about 86 percent, refined benzol

53 percent, and sulphuric acid 44 percent that of the USSR. During the period of this estimate the principal change in these percentages will be an increase of Satellite output of synthetic ammonia from 86 to 123 percent that of the USSR.

ESTIMATED SOVIET AND SATELLITE PRODUCTION OF SELECTED  
CHEMICALS 1953 AND 1956  
(In 000's of metric tons)

Commodity	Satellites		USSR		Satellite Production as Percent of USSR	
	1953	1956	1953	1956	1953	1956
Sulphuric Acid	1,211	1,564	2,750	3,660	44	43
Caustic Soda	403	510	387	540	104	94
Chlorine	294	381	295	377	100	101
Synthetic Ammonia	462	737	535	600	86	123
Calcium Carbide	1,015	1,264	340	445	299	284
Refined Benzol	143	164	271	376	53	44

### Satellite Agriculture

30. In contrast to the rapid growth of industry, Satellite agriculture has lagged seriously since the postwar phase of recovery. Although the output of industrial crops returned to the prewar levels between 1948 and 1950, over-all

agricultural production, owing to the low output of food crops and animal products, has not yet regained the prewar level of production. Over-all agricultural output in 1951 was an estimated 14 percent below the prewar level, but it slipped back in 1953 to approximately 21 percent below that level.

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 ESTIMATED INDICES OF SATELLITE  
 AGRICULTURAL PRODUCTION
 

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	(1950=100)				
	1935-1939 Average	1948	1951	1953	1956*
ALL					
SATELLITES	118	85	102	93	100
Albania	92	99	107	101	104
Bulgaria	99	104	106	100	102
Czechoslovakia	110	83	100	95	96
East Germany	120	80	108	99	109
Hungary	108	93	112	95	100
Poland	119	80	92	86	93
Rumania	126	104	114	96	103

\* These estimates assume continuation of current policies and average weather conditions.

31. Total agricultural collectivization continues to be the acknowledged long-term goal of Satellite governments. However, the Satellite leaders of East Germany, Czechoslovakia, and Hungary, in deference to peasant opposition, have publicly committed themselves to allow voluntary withdrawals from the "cooperatives." As a result, Czechoslovakia and Hungary have lost ground in their collectivization programs, the greater loss being sustained by Hungary, where about 33 percent of arable land was socialized<sup>6</sup> in December 1953 as against 39 percent six months earlier, and where there was a 42 percent net loss in membership in "cooperatives" during this period. On the other hand, no steps have been taken by Bulgaria, Poland, or Rumania to permit the peasants to withdraw. Poland, in fact, with only about 21 percent of its arable land socialized (one of the smallest percentages among the Satellites), has announced that agricultural collectivization in 1954 and 1955 will continue at the same tempo as in 1953 — approximately 3,000 collectives per year. Bulgaria, which leads the Satellites in percentage (about 55) of arable land socialized, and Rumania (about 25 percent of arable land socialized) have given no indication that they plan to push forward with collectivization for the present. We believe that these latter states — along with Czechoslovakia (about 45 percent of arable land socialized), East Germany (about 18 percent of arable land socialized), and Hungary — are likely in the immediate future to concentrate on making the present collectivized farms more efficient and also

<sup>6</sup> Including cooperatives and state farms.

more attractive to the peasants and on increasing the level of mechanization.

32. Peasant opposition to the program of forced collectivization and compulsory deliveries has been the principal deterrent to increased agricultural production. Other major factors contributing to the stagnation in Satellite agriculture are the reduction in size and quality of the agricultural labor force and the low level of investment in agriculture. Although East Germany, Poland, Czechoslovakia, and Hungary are endeavoring to overcome their agricultural labor shortages either by shifting labor from industry to agriculture or by halting the outflow of rural labor, the agricultural labor force for the Satellites as a whole will probably remain virtually static through mid-1956 (somewhat less than 22 million). On the other hand, the nonagricultural labor force will probably increase during this period from an estimated 21 million to about 23 million. The revised plans provide for significant additions of agricultural machinery, particularly for the machine tractor stations and state farms. The shift of emphasis to agriculture appears most likely to continue in Hungary, which has announced that state agricultural investment in 1953-1955 will be 2.5 times that of the preceding three-year period. State agricultural investment plans in the other Satellites range from a doubling in 1954 over the previous year in Rumania and Czechoslovakia down to a 36 percent increase in Bulgaria (1954 over 1953) and a 45 percent increase in Poland over the two-year period 1954-1955. Even these large percentage increases will leave total agricultural investment at a low level and it will probably be impossible to raise production sufficiently to meet planned goals.

33. The Satellites will probably continue to make only slow progress in applying modern methods to the development of their agriculture, and peasant opposition to agrarian policies of Satellite governments will continue. Discrimination against the independent farmers in favor of the "cooperatives" with respect to taxes and compulsory delivery quotas, and uncertainty regarding future state measures for collectivization of agriculture will continue

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to have a depressive effect on production. We believe that during the period of this estimate Satellite agricultural output will probably achieve only small advances (of the order of 8 percent) over the 1953 level, and that by the end of 1956 it will still be about 15 percent below prewar. During the same period the total population of the Satellites will probably increase about 3 percent (regaining the 1938 level).

### Foreign Trade

34. The most important development in Satellite foreign trade has been its reorientation away from Western countries toward the Bloc. The trade of the Satellites with the West declined from more than four-fifths of their total trade before the war to less than one-third in 1951 and 1952. During the same period, Satellite trade with the USSR increased from one one-hundredth to over one-third of the total trade. Czechoslovakia, Poland, and to an increasing extent East Germany also carry on an important trade with each other and with the other Satellites. Trade with China, although still a small percentage of total trade of any of the Satellites, is increasing. Altogether the intra-Bloc (including China) trade of the Satellites has increased from about one-sixth of their total trade before the war to about two-thirds in 1951. (See Figure 4.)

35. The Soviet-styled programs of rapid industrialization in the Satellites, plus tight Soviet economic controls, have played a decisive role in the postwar decline of Satellite trade with the West. Industrialization programs have greatly increased requirements within the Soviet Bloc for those industrial and agricultural raw materials which formed a large part of Eastern Europe's traditional exports to the West. At the same time Satellite investment priorities have neglected the agricultural sector which provided a large part of these traditional exports. Moreover, the Satellites have exported large quantities of food and light industrial products to the USSR, thus aggravating shortages in the Satellites and further limiting availabilities for export to the West.

36. The trade agreements and negotiations carried on by the Satellites with non-Communist countries in the latter part of 1953 and the first few months of 1954 indicate that the Satellites have been following a trading policy similar to that followed by the USSR. Three tendencies became evident in these negotiations: (a) an effort to expand trade relations with non-Communist countries; (b) an effort to increase imports of consumer goods into the Satellites; and (c) an effort to expand trade relations with areas which were formerly not important trading partners of the Satellites. Satellite trade with the West may increase during the period of this estimate. However, expansion of this trade will continue to be limited by the factors mentioned in paragraph 35. Moreover, we believe it is unlikely that the Soviet Union will permit trade between the Satellites and the non-Communist world to expand to such an extent as to alter the basic economic orientation of the Satellites toward the USSR or to weaken their economic dependence upon the USSR.

37. In summary, economic development of the Satellite area as a whole has followed much the same pattern as in the USSR; i.e., a rapid development of basic producers' goods industries and a neglect of agriculture and consumers' goods industries. Though the Satellites provide about 30 percent of the production of the Bloc (excluding Communist China), their output parallels more than it complements that of the USSR. Soviet dependence on Satellite supplies to meet its own requirements, while not quantitatively great, is of particular importance in certain fields, e.g., uranium ore, precision instruments, certain chemicals, selected items of machinery and transport equipment, and electrical equipment. On the other hand, given the current low level of Bloc trade with the non-Communist world, the Satellites are highly dependent on the USSR for a wide range of supplies.

### V. SCIENTIFIC DEVELOPMENTS

38. The scientific and technical capabilities of Eastern Germany and Czechoslovakia, and to a lesser extent Hungary and Poland, constitute substantial additions to those of the

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USSR. In particular, the electronics and communications research capabilities of East Germany, Czechoslovakia, and Hungary, and the optics research capabilities of East Germany are of considerable value to the Soviet Union. These countries, particularly East Germany, and to a lesser extent Czechoslovakia and Poland, also have chemical research facilities for the development of new or improved products which are of economic or potential military use. East Germany has also made advances in medical research which may increase the Soviet Union's biological warfare potential.

39. The electronics industries of East Germany, Czechoslovakia, and Hungary have contributed to the development of the elaborate broadcast jamming system in operation throughout the Satellite countries as well as the USSR. The system now is capable of covering all regularly used parts of the radio frequency spectrum up to 30 mc/s. These three Satellites possess the capability to develop jamming equipment in other parts of the frequency spectrum, up to and including the microwave regions.

40. The Satellites have undertaken programs to increase their scientific and technological capabilities by enlarging enrollments in higher educational institutions, by reorganizing academies of science, and by granting preferential treatment to scientists. Although Satellite scientific and technological facilities will be better organized and will improve in quality in the next two years, Satellite capabilities will become less essential to the USSR because of the growth of Soviet capabilities in the areas in which the Satellites are now making important contributions. However, the USSR will continue to furnish the direction and controls that it deems necessary to orient selected Satellite scientific capabilities to Soviet ends.

41. *Satellite Contribution to Soviet Nuclear Program.* Although East Germany and Czechoslovakia have supplied special equipment for the Soviet nuclear energy program on a specific order basis (e.g., calcium metal of high purity, fine drawn nickel wire, fine woven nickel wire mesh, vacuum pumps, and electric

motors), the main contribution of the Satellites to the Soviet nuclear program is in uranium ores and concentrates. We estimate that East Germany is currently providing about half of Bloc production of uranium. The other Satellites are less important sources; the largest producer after East Germany is Czechoslovakia. Although East German uranium production has probably reached its peak, uranium from that area will probably be sufficient to meet a substantial proportion of Soviet requirements during the period of this estimate. Elsewhere in the Satellites, new uranium deposits are still being developed. The USSR, however, is not dependent upon Satellite sources. If necessary the Soviet atomic energy program could probably be supported at its present level of operation from internal Soviet sources alone. Nevertheless, the USSR will almost certainly wish to continue its rapid and large-scale exploitation of Satellite ores in order to accumulate maximum reserves.

## VI. MILITARY DEVELOPMENTS

### The Strategic Importance of the Satellites to the USSR

42. Soviet control of the Satellites has in effect moved the Soviet military frontier into Central Europe. In view of the strategic importance of this region, the USSR has given priority to its development for military operations. The USSR derives such strategic advantages as advance air and ground bases, highly developed road, rail, and waterway communications, and a substantial productive capacity which can be harnessed to the support of Soviet military operations. Moreover, the USSR has acquired a large geographic buffer in which to maintain a forward deployment of its military forces and to develop an extensive air defense system. Satellite capability for jamming, added to that of the USSR, would constitute a serious threat to Western long-range radio communications in time of war. The Satellites also possess an extensive radar warning screen which is being continually expanded and improved. This net could provide a significant additional margin

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of time for warnings of air attack from the west against the USSR. The Satellites have also provided the USSR additional naval base and port facilities.

### Soviet Forces in the Satellites<sup>7</sup>

43. Of an estimated 531,000 Soviet troops (plus 24,000 security troops) stationed in the Satellites, approximately 415,000 (22 line divisions) are located in East Germany, while the remaining 140,000 (8 line divisions) are located in Austria, Hungary, Poland, and Rumania. Soviet air units based in the Satellites and in the Soviet zone of Austria have an estimated TO&E strength of about 2,200 aircraft (estimated strength about 1,800). This includes about 1,330 jet fighters and 180 jet light bombers. Soviet Naval Forces in the Satellites are confined largely to East Germany, and are composed of small patrol and mine vessels. We believe that Soviet forces in the Satellites are not likely to increase in size during the period of this estimate, although re-equipment may improve their combat effectiveness.

### Satellite Ground Forces<sup>8</sup>

44. The Satellite ground forces have become a substantial element in the balance of military power in Europe. Their present strength is estimated at 1,115,000 men organized in 82 line divisions, of which 6 are armored and 13 mechanized. These forces are supplemented by Satellite security troops which total about 306,000 men. The Satellite ground forces, with the exception of the East German, have probably reached nearly the desired peacetime strength level. East Germany was set back in its military development program by the 17 June riots, and will probably increase the Garrisoned People's Police (Kasernierte Volkspolizei-KVP) from its present strength of about 100,000 to about 175,000 by mid-1955. In addition, the Rumanian Army will show an increase during this period from about 215,000

<sup>7</sup> For more detail on Soviet military dispositions in the Satellites, see Appendix, Table 1.

<sup>8</sup> For detailed figures on ground forces in each country, see Appendix, Table 2.

troops to about 290,000. We estimate, therefore, that the Satellite ground forces will reach an over-all peacetime strength of approximately 1,265,000 men, organized into about 93 line divisions (8 armored and 18 mechanized), by mid-1955. No substantial increase in strength is likely to occur thereafter. We estimate that the Satellite security forces will remain at about their present level of strength.

45. The USSR controls these Satellite forces by direct Soviet staffing in Poland and by large Soviet military missions in all other countries. These missions vary from approximately 500 officers in the case of Albania to about 2,000 in Bulgaria. General officers possessing extensive combat and command experience have recently been appointed as Soviet military attaches in all the Satellites except East Germany. Soviet control is being reinforced by the selection of a politically reliable officer corps, and by the use of Soviet methods, military doctrine, organization, and equipment. Moreover, with the exception of East Germany and Albania, the Satellites are bound to the USSR by a system of mutual assistance pacts.

46. The Satellite armies are equipped largely with Soviet World War II material of good quality, but they would require substantial amounts of additional supplies and equipment for sustained combat. They are dependent upon the USSR for tanks, self-propelled guns, heavy artillery, and some light artillery. The Satellites are now manufacturing for their use noncombat vehicles, light artillery, small arms, and ammunition. Czechoslovakia is the only Satellite now producing armored fighting vehicles, but its production is negligible (an estimated 60 tanks of the Soviet T-34 type annually). A relatively small proportion of Satellite divisions is motorized and mechanized and major deficiencies in motor transport, heavy armor, artillery, and communication equipment will continue for the period of this estimate.

47. Although the Satellite armies have been reorganized to conform to the Soviet pattern, the various national units still exhibit marked differences in training, equipment, and morale. Their combat effectiveness is greatly

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inferior to that of equivalent Soviet units. The combat effectiveness of these forces will improve, but will remain only fair. It is unlikely that many of the divisions would be suitable for offensive operations. Moreover, in case of war the Satellite forces would be dependent upon the USSR for logistical support.

48. The questionable political reliability of the Satellite armies places a significant limitation upon their military usefulness. At present the Kremlin could probably not rely upon the majority of the Satellite armies in a general war except for employment in secondary roles or in a defensive capacity. However, against traditional enemies (e.g., Poles and Czechs against Germans, or Bulgarians against Yugoslavs, Greeks, and Turks) Satellite armies would probably fight well, at least if victory appeared likely. Although tight Communist control and continued indoctrination, coupled with intensive efforts to win the youth, will probably increase the political reliability of the Satellite armed forces, we believe that their reliability will remain sufficiently uncertain for the period of this estimate to limit their usefulness, particularly the forces of East Germany.

49. The Satellite ground forces do not form a single coordinated organization. There is no reliable evidence of the existence of combined staffs or commands among the ground forces. No combined high-level maneuvers of Satellite or Soviet-Satellite forces have been conducted. However, a trend toward coordination is indicated by Soviet efforts to standardize organization, tactics, and training as well as equipment and weapons in all the Satellite armed forces. In the event of general war, the Satellite forces would receive over-all direction from the Soviet high command, and might be placed directly under Soviet officers.

50. Satellite ground force reserves are estimated at more than 2,300,000 men fully trained in the use of Soviet weapons and tactics. These men receive frequent refresher training and could be quickly mobilized in the event of war. In addition, there are about three million men who served before or during World War II. These men would require extensive refresher training before they could

be effectively integrated into the new Soviet trained divisions.

### Satellite Air Forces and Airfields<sup>9</sup>

51. The Satellite air forces now have an estimated TO&E strength of 3,600 aircraft of all types (approximately 2,400 actual), and we estimate that by mid-1956 they will probably have a TO&E strength of 4,400, of which 2,450 will probably be jet fighters. Total personnel strength is estimated at about 89,000. Piston fighters continue to be replaced by jet fighters (there were an estimated 940 jet fighters in April 1954 compared to about 700 in April 1953), and other equipment is being modernized. An estimated 40 jet light bombers of the IL-28 type have been introduced into the Polish Air Forces as a part of the jet re-equipment program. Other Satellite air forces have not yet received these bombers, but some will probably be supplied with a few during the period of the estimate.

52. While substantial progress has been made in the build-up of Satellite air strength, the current operational capabilities of these forces are unevenly developed. Emphasis will probably be placed on the strengthening of the Satellite fighter and light bomber establishments. During the period of this estimate the Satellite air forces will probably constitute a significant increment to Soviet air power in Europe.

53. Intensive Soviet training of carefully selected Satellite pilots assures Soviet control and identity of doctrines, techniques, and tactics. Soviet policy appears to be directed toward the attainment of a high degree of coordination between the air force of each Satellite and the Soviet Air Force, and the integration of the Satellite air forces into the Soviet air defense system. There has been little coordination among the individual Satellite air forces. We estimate that this policy is likely to continue through mid-1956.

54. The over-all political reliability of the Satellite air forces, like that of the Satellite armies, is questionable. Since the Polish de-

<sup>9</sup> For strength figures in aircraft and personnel by country, see Appendix, Table 3.

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fections of last year, the USSR has strengthened its control over flying activities in all Satellite air forces. Concomitantly, there have been increased efforts to improve personnel selections and political indoctrination. Emphasis has also been placed upon the role of the air forces in the air defense of each Satellite, thus stressing the national interest of the air effort. These measures will probably increase the political reliability of the Satellite air units. Nevertheless, for the period of this estimate the reliability of such forces will remain dubious enough to restrict their usefulness, especially in a general war situation.

55. Until 1953 virtually all combat type aircraft and parts for their logistical support were furnished to the Satellites by the USSR. During 1953 Czechoslovakia, and to a lesser degree Poland, increased their production of aircraft and engines, and together these countries accounted for about 10 percent of total Bloc combat aircraft production. We estimate that during the next two years Czech and Polish production will probably be adequate to meet all Satellite normal peacetime requirements for jet fighters and ground-attack aircraft.

56. An extensive program of airfield improvement and construction is being continued in all the Satellites. Principal emphasis has shifted from East Germany to Poland, but other Satellites continue to pursue a vigorous airfield construction effort. There are over 400 airfields available to Soviet forces in the Satellites, including 44 with a minimum runway length of 8,000 feet, 24 of 7,000 to 8,000 feet, and 35 of 6,000 to 7,000 feet, or a total of 103 airfields with the minimum capability of supporting sustained operations for MIG's and IL-28's. Runways now being built are at least 7,000 feet long and many are 8,000 or more. One airfield, now under construction in East Germany, has an 11,500 feet runway, an extra thickness of concrete, and large POL storage facilities. Many Satellite fields are being equipped with night lighting, radio navigation aids, radar, increased POL facilities, and improved structures. This growing

network of modern well-equipped air facilities, as it progresses toward completion, will add materially to Soviet Bloc air capabilities.

### Satellite Naval Forces<sup>10</sup>

57. Owing to their small size, their meager equipment, and the unreliability of the personnel, the Satellite navies lack the capability of making more than a minor contribution to Soviet naval strength. However, Satellite ports and bases provide the USSR with a considerable extension of naval logistic and operational facilities. Development of Satellite naval installations will probably continue to be limited to improvement of existing coastal defense fortifications and to possible expansion of existing operating bases. Satellite naval and river forces are controlled by Soviet officers and are being developed according to the Soviet pattern to permit their operation as adjuncts to the Soviet Black Sea and Baltic naval forces. But despite these measures, the questionable reliability of the Satellite naval forces will continue during this period to restrict their usefulness. A Soviet destroyer has been turned over to Bulgaria and a few ships (mine and escort types) given to Poland. By 1955 the Polish and East German navies will probably have the capability of providing appreciable assistance to the Soviet Navy in such fields as minesweeping, minelaying, escort, and coastal defense. The Rumanian and Bulgarian navies, however, will be capable of rendering only minor assistance. Satellite shipbuilding facilities are largely devoted to the construction and repair of merchant vessels.

58. Poland has developed a naval air arm of one composite air division comprising an estimated 40 aircraft (actual strength), including 30 jet fighters and 10 piston-type light bombers. By mid-1956 its strength will probably be about 150 aircraft with an increase in the percentage of jet light bombers and fighters. The effectiveness of this air arm will probably remain limited during the period of this estimate.

<sup>10</sup> For detailed figures on Satellite naval strength, see Appendix, Table 4.

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PRODUCTION CHARTS FOR PARAGRAPH 55  
ESTIMATED CZECH AND POLISH AIRCRAFT PRODUCTION 1952-1956 \*

Country	Aircraft	Power Plant	1952	1953	1954	1955	1956
Czechoslovakia	MIG-15						
	jet fighter	RD-45	21	432	267	...	...
	MIG-15 Bis						
	jet fighter	VK-1	..	...	422	340	...
	MIG-17						
	jet fighter	VK-1A	..	...	...	60	475
	IL-28						
Poland	light bomber	VK-1	..	...	...	...	10
	IL-10						
	attack	AM-42	48	395	300	...	...
	MIG-15						
	jet fighter	RD-45	3	42	210	50	...
	MIG-15 Bis						
	jet fighter	VK-1	..	...	...	150	75
MIG-17							
jet fighter	VK-1A	..	...	...	...	25	

ESTIMATED CZECH AND POLISH AERO-ENGINE PRODUCTION 1952-1956 \*

Country	Engine	Power Rating	1952	1953	1954	1955	1956
Czechoslovakia	RD-45	5,000 lbs.	52	1,080	668	...	....
	VK-1	6,000 lbs.	...	....	1,055	850	50
	VK-1A	7,000 lbs.	...	....	....	150	1,190
	AM-42	1,975 hp.	120	990	750	...	....
Poland	RD-45	5,000 lbs.	7	105	525	125	....
	VK-1	6,000 lbs.	...	....	....	375	190
	VK-1A	7,000 lbs.	...	....	....	...	65

\* It is believed that aircraft and engine production estimates through mid-1954 are within a few percent of being correct. Estimates of the number of aircraft produced of each type are based principally upon floor space, labor force, efficiency of the industry, date of first production, and on actual aircraft counts. There is some question as to whether the current output of fighters consists of the MIG-15 with the RD-45 engine or the MIG-15 Bis with the VK-1 engine. It is believed that those fighters now being produced in Czechoslovakia are equipped with VK-1 engines while those produced in Poland, and earlier models in Czechoslovakia, are equipped with RD-45 engines. Estimates of future production are based on assumptions that the present scale of production effort will not change substantially and that newer aircraft types now being produced in the USSR will gradually replace older models in the Satellites after the Soviets begin production of new types of replacements for their present models. Estimates of engine output are based on requirements to keep pace with airframe output.

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## APPENDIX, TABLE 1

SOVIET FORCES ESTIMATED TO BE STATIONED IN THE SATELLITES<sup>1</sup> JULY 1954

Country	Army		Security Troops	Soviet-Manned Aircraft <sup>2</sup>								
	Number of Troops	Line Divisions		Fighters		Light Bombers		Attack	Transport	Reconnaissance		TOTAL
				Jet	Piston	Jet	Piston			Jet	Piston	
E. Germany	400,000	22	15,000	740	..	90	..	330	90	..	..	1,250
Poland	35,000	2	2,000	150	..	..	..	130	10	30	..	320
Czechoslovakia	500	..	..	..	..	..	..	..	..	..	..	..
Hungary	30,000	2	1,500	110	..	90	..	..	..	..	..	200
Soviet Zone of Austria	33,000	2	2,500	220	..	..	..	..	10	..	..	230
Albania	500	..	..	..	..	..	..	..	..	..	..	..
Rumania	30,000	2	2,000	110	..	..	..	50	30	..	..	190
Bulgaria	2,000	..	1,000	..	..	..	..	..	..	..	..	..
<b>TOTAL</b>	<b>531,000</b>	<b>30</b>	<b>24,000</b>	<b>1,330</b>	<b>..</b>	<b>180</b>	<b>..</b>	<b>510</b>	<b>140</b>	<b>30</b>	<b>..</b>	<b>2,190</b>

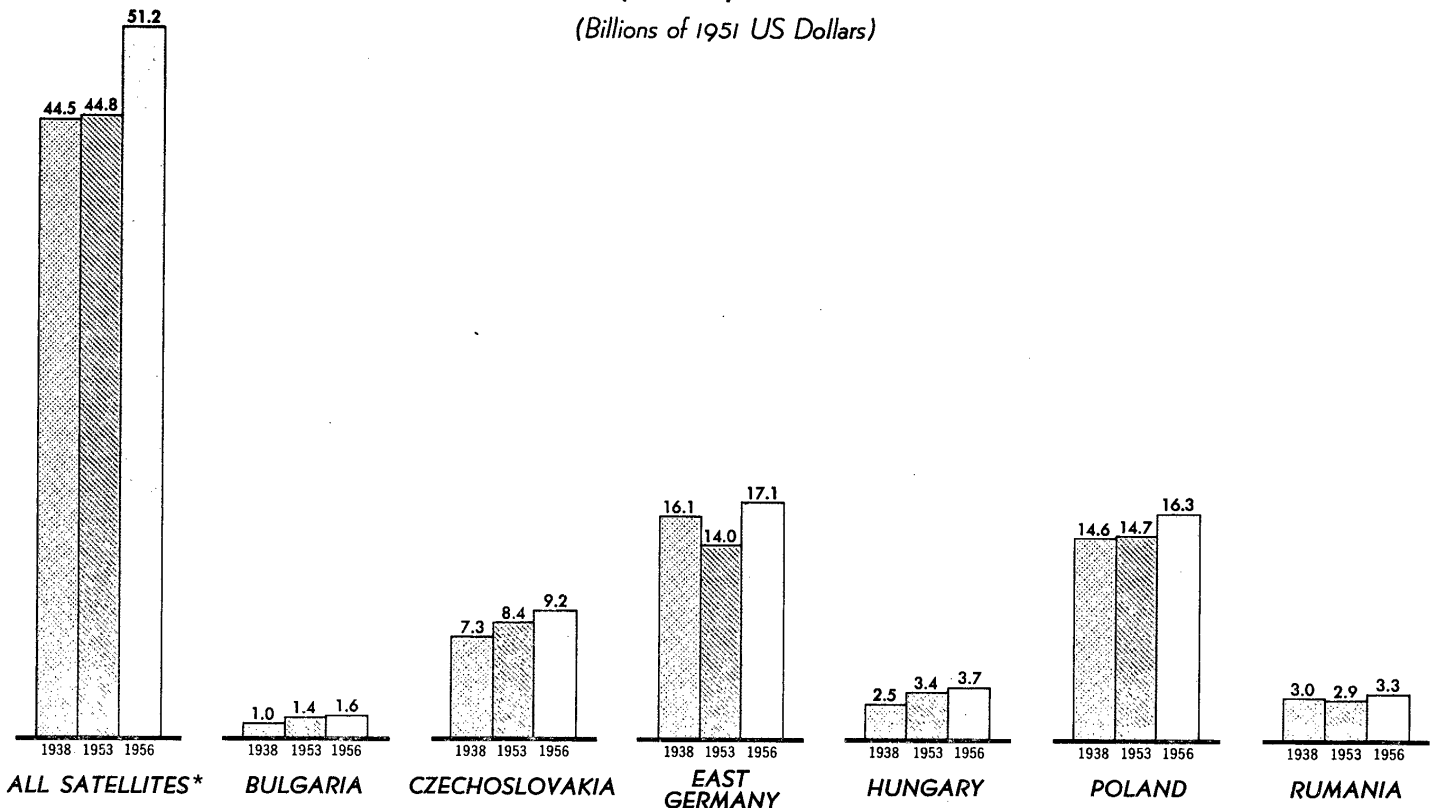
<sup>1</sup> Includes units of the Air Forces of the Soviet Army and Naval Aviation.<sup>2</sup> Approximate figures based on authorized (TO&E) strength.

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Figure 1

**SATELLITES\***  
**ESTIMATED GROSS NATIONAL PRODUCT**  
**1938, 1953, and 1956**  
*(Billions of 1951 US Dollars)*



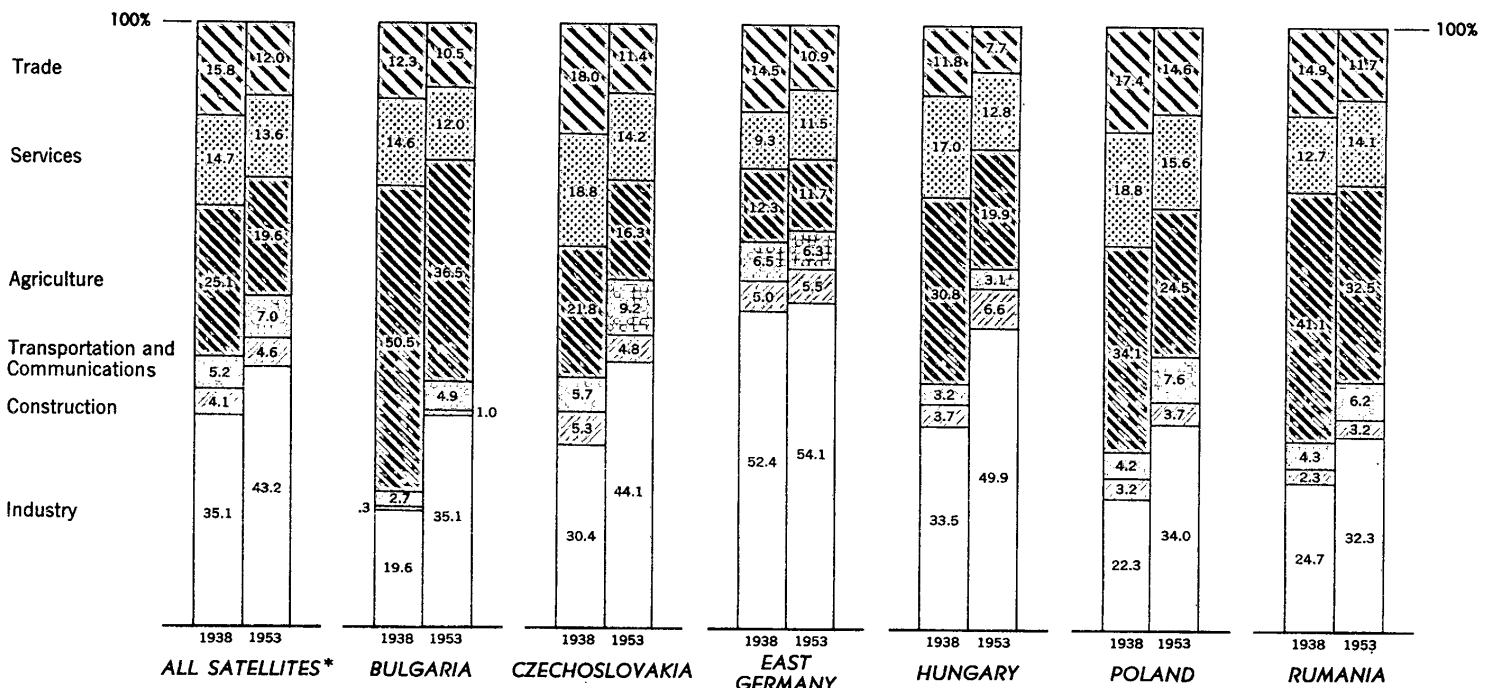
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\*Excludes Albania

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Figure 2

**SATELLITES\***  
**ESTIMATED DISTRIBUTION OF GROSS NATIONAL PRODUCT**  
**BY SECTOR OF ORIGIN, 1938 and 1953**  
*(In Percent)*



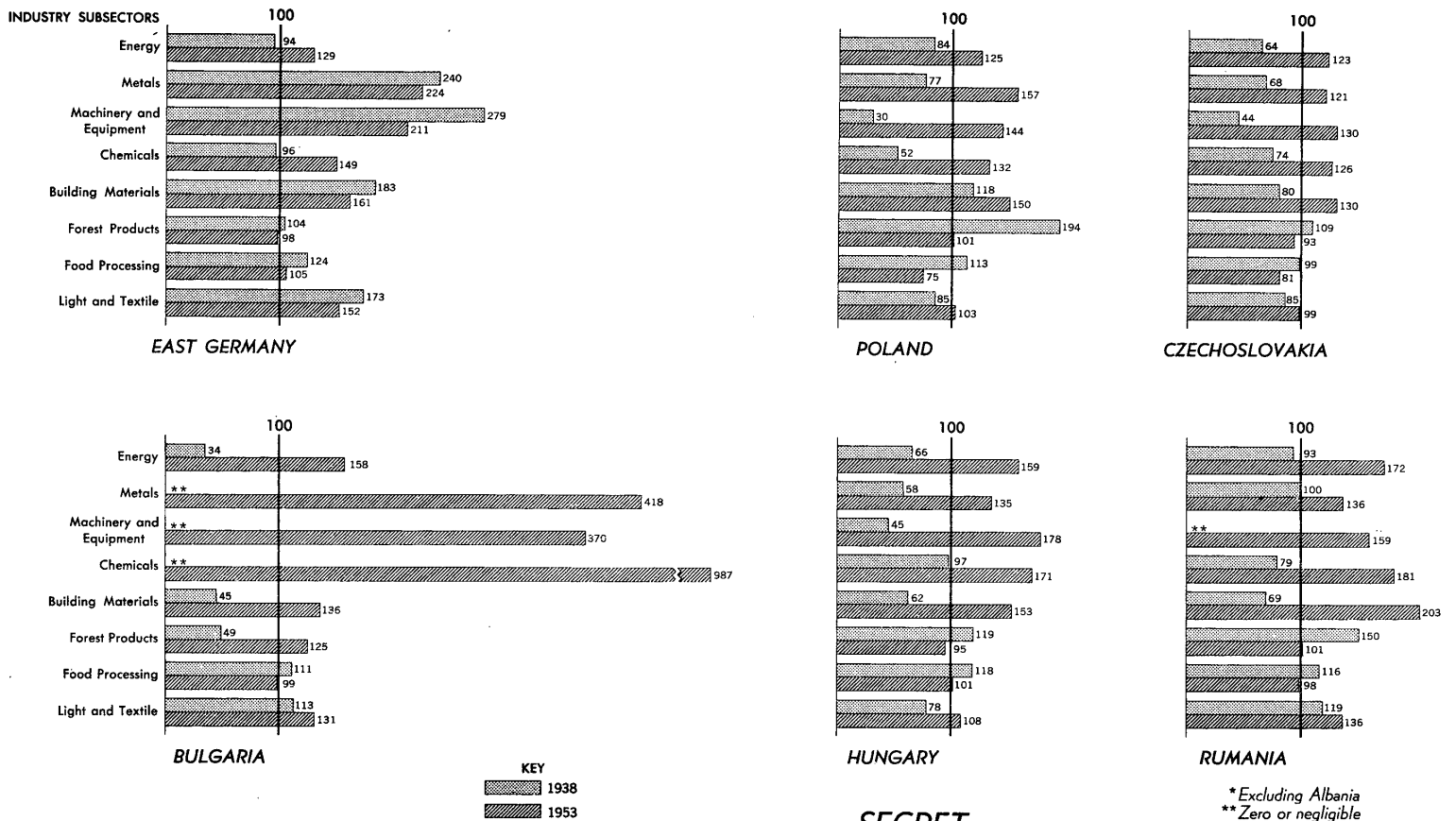
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\*Excludes Albania

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Figure 3

**SATELLITES\***  
**ESTIMATED PRODUCTION INDICES**  
**1938 and 1953**  
 1950 = 100



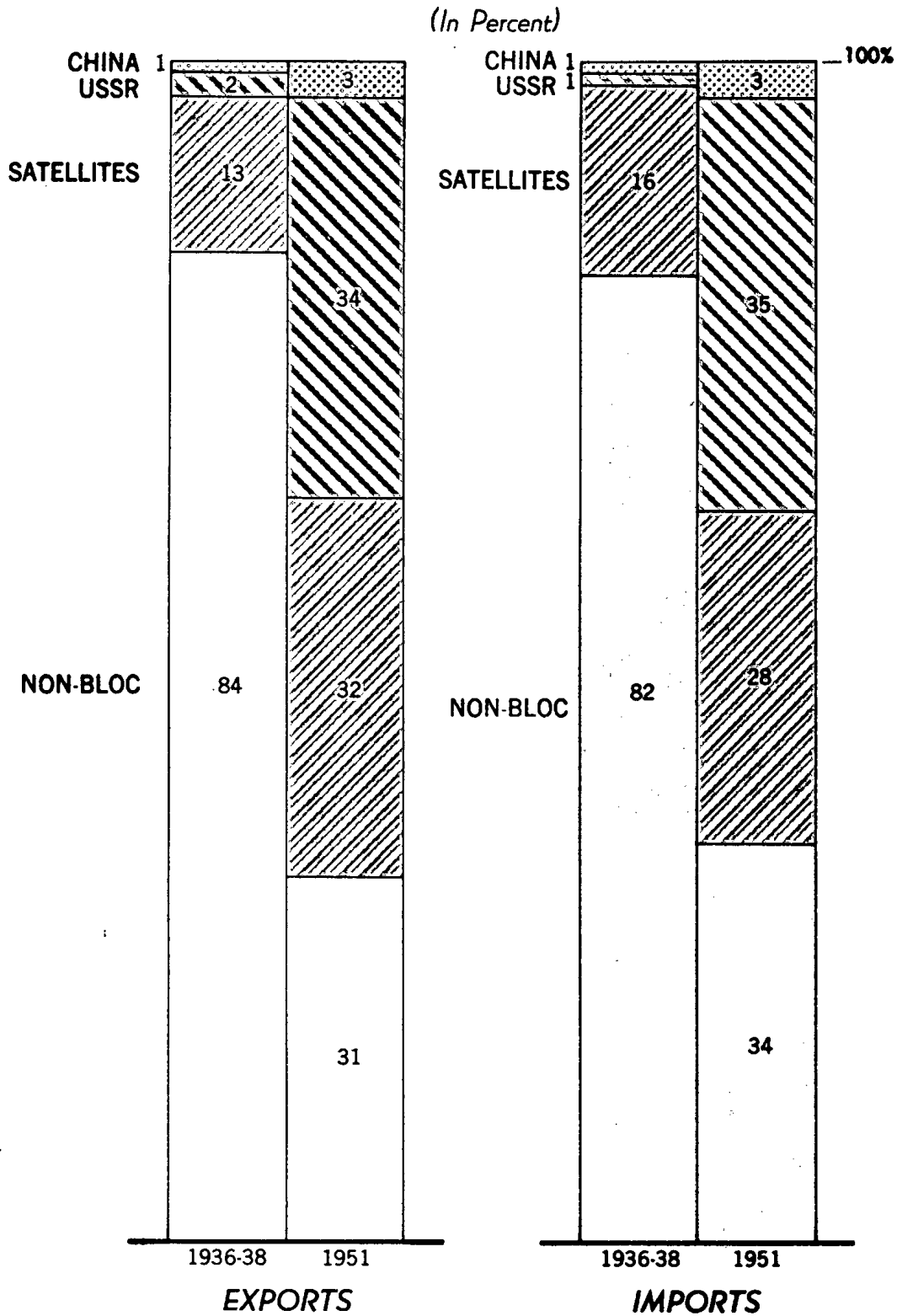
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Figure 4

# SATELLITES

## ESTIMATED GEOGRAPHIC DISTRIBUTION OF TRADE 1936-38 AVERAGE and 1951



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APPENDIX, TABLE 2<sup>1</sup>

ESTIMATED DEVELOPMENT OF SATELLITE GROUND FORCES 1954-1956															
July 1954									July 1956						
Country	Total Army	Total Security Troops	Percent of Total Population (Army & Security)	DIVISIONS				Trained & Partially Trained Reserves	Total Army	Total Security Troops	Percent Increase (Army & Security)	DIVISIONS			
				Armed	Mech.	Rifle	Total					Armed	Mech.	Rifle	Total
E. Germany	100,000	25,000	.68	0	3	4	7	30,000	175,000	25,000	60	0	4	8	12
Poland	250,000	65,000	1.22%	0	5	12	17	550,000	250,000	65,000	0	2	4	13	19
Czechoslovakia	170,000	40,000	1.86%	2	4	8	14	415,000	170,000	40,000	0	2	4	8	14
Albania	30,000	10,000	3.15%	0	0	3 <sup>2</sup>	3	37,500	30,000	10,000	0	0	0	3	3
Hungary	150,000	38,000	1.97%	1	1	12 <sup>2</sup>	14	300,000	150,000	38,000	0	1	2	11	14
Rumania	215,000	78,000	1.78%	1 <sup>3</sup>	0	12	13	450,000	290,000	78,000	25.6	1	2	12	15
Bulgaria	200,000	50,000	3.25%	2	0	12	14	550,000	200,000	50,000	0	2	2	12	16
<b>TOTAL</b>	<b>1,115,000</b>	<b>306,000</b> (Mean Average)	<b>1.5%</b>	<b>6</b>	<b>13</b>	<b>63</b>	<b>82</b>	<b>2,332,500</b>	<b>1,265,000</b>	<b>306,000</b> (Mean Average)	<b>1%</b>	<b>8</b>	<b>18</b>	<b>67</b>	<b>93</b>

<sup>1</sup> The figures on the strengths of Satellite armies are considered fairly reliable; the margin of probable error is less than 10 percent. Information on the Rumanian Army is more limited than on the others, and strength estimates for that army have a slightly lower reliability.

<sup>2</sup> Includes 1 Cav. Div.

<sup>3</sup> Includes 2 Mnt. Div.

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APPENDIX, TABLE 3<sup>1</sup>

## ESTIMATED SATELLITE AIR FORCES JULY 1954

COUNTRY	Fighters				Light Bombers						Transport	Reconnais- sance	Total		Personnel		
	Jet TO&E	Actual	Piston TO&E	Actual	Attack TO&E	Actual	Jet TO&E	Actual	Piston TO&E	Actual			TO&E	Actual		TO&E	Actual
E. Germany	...	...	150	80	...	...	..	..	...	...	...	...	...	...	150	80	6,500
Poland <sup>2</sup>	630	300	...	...	330	260	60	40	100	50	20	20	40	30	1,180	700	20,000
Czechoslovakia	440	260	...	...	250	200	..	..	...	...	30	30	30	30	750	520	18,000
Hungary	220	200	...	...	80	90	..	..	40	40	30	20	...	...	370	350	18,000
Albania	...	...	10	10	...	...	..	..	...	...	...	...	...	...	10	10	200
Rumania	220	160	...	...	120	80	..	..	40	30	30	20	40	30	450	320	12,000
Bulgaria <sup>3</sup>	270	110	100	90	130	110	..	..	120	70	30	20	40	20	690	420	14,000
<b>TOTAL</b>	<b>1,780</b>	<b>1,030</b>	<b>260</b>	<b>180</b>	<b>910</b>	<b>740</b>	<b>60</b>	<b>40</b>	<b>300</b>	<b>190</b>	<b>140</b>	<b>110</b>	<b>150</b>	<b>110</b>	<b>3,600</b>	<b>2,400</b>	<b>88,700</b>

<sup>1</sup> The figures for actual aircraft strengths noted above are considered to be fairly reliable, particularly for the principal Satellites such as Poland, Czechoslovakia, and East Germany; the evidence for the remaining countries is less firm.

<sup>2</sup> Includes Polish Naval Air Arm consisting of 40 TO&E (30 estimated actual) jet fighters and 20 TO&E (10 estimated actual) piston light bombers.

<sup>3</sup> Does not include approximately 130 single engine trainer types carried in so-called "night light bomber" units of the Bulgarian Air Force.

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APPENDIX, TABLE 4<sup>1</sup>

ESTIMATED SATELLITE NAVAL FORCES JULY 1954							
Country	Destroyer	Submarines	Patrol	Mine	Amph. LCU	Auxiliary	Personnel
East Germany	..	..	36 <sup>2 5</sup> (12)	18 (29)	..	2	9,200
Poland	1	3	15	12	15	9	8,800
Albania	..	..	14	3	..	..	800
Rumania	4 <sup>3</sup>	3	23	4	..	2	7,500
Bulgaria	1	..	31 <sup>4</sup>	20	..	4	4,900
<b>TOTAL</b>	<b>6</b>	<b>6</b>	<b>119</b>	<b>57</b>	<b>15</b>	<b>17</b>	<b>31,100</b>

<sup>1</sup>The figures on the strength of the East German Sea Police, and on the Polish Navy are considered reliable. The figures on the Rumanian, Bulgarian, and Albanian navies are of a lesser order of reliability, but are believed to be generally accurate.

<sup>2</sup>Eight under operational control of border police.

<sup>3</sup>Overage or obsolete.

<sup>4</sup>Twenty-nine are ex-PT boats.

<sup>5</sup>These vessels are small district and harbor patrol craft, not strictly seagoing patrol vessels.

NOTE: The figures in parentheses indicate vessels under construction.

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# = ESTIMATES - VIEW/OBTAIN FROM NARA

+ = PG. COUNT CONFIRMED

(SAN) = SANITIZED